

REMARKS

Claims 1, 2 and 4-10 are pending in this application. By this Amendment, claim 4 is amended to correct grammatical errors and finds support in the specification as filed at page 6, lines 12-18. Claim 10 is added, and finds support in at least original claims 1 and 4. No new matter is added by this Amendment.

The courtesies extended to Applicant's representative by Examiner Gray at the interview held August 13, 2009, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below, which constitute Applicant's record of the interview.

I. Rejection Under 35 U.S.C. §103(a)

The Office Action rejects claims 1, 2 and 4-9 under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 7,053,145 ("Tasaka") in view of Japanese Patent Publication No. JP 07-207109 ("Aoyama"). Applicant respectfully traverses this rejection.

A. Tasaka Fails To Describe The Flame-Retardant Resin Composition Of Claim 1

The Patent Office alleges that Tasaka describes a flame-retardant resin composition "essentially of the type contemplated by applicants". Office Action, page 2, section 2. Applicant respectfully disagrees.

Tasaka describes a fire-retardant resin composition, but further specifies that the resin composition includes a (meth)acrylate-series and/or allyl-series crosslinking aid. Tasaka, Abstract. Tasaka discloses a thermoplastic resin optionally including polypropylene resin (Tasaka, column 4, lines 16-27), but Tasaka also describes that the thermoplastic resin is heated and kneaded to form a partially crosslinked product (Tasaka, column 10, lines 19-20). Even a partially crosslinked product, as described in Tasaka, is not a non-crosslinked flame-retardant resin, as recited in claim 1.

Tasaka also discloses a softener for rubber that is used to inhibit the crosslinking reaction to improve the flexibility of the compound by preventing complete crosslinking of the resin. Tasaka, column 8, lines 21-27. Nonetheless, the composition of Tasaka is still a crosslinked product, which is opposite the non-crosslinked composition of claim 1.

Therefore, the composition of Tasaka is not the non-crosslinked fire-retardant resin composition recited in claim 1.

B. Aoyama Fails To Remedy The Deficiencies Of Tasaka

Aoyama describes a polyolefin-type resin composition comprising (1) a modified polyolefin, (2) phenolic and/or sulphuric compounds, and (3) phenolic, phosphoric and/or sulphuric antioxidants. Aoyama, Abstract. The Patent Office asserts that it would have been obvious for one of ordinary skill in the art to have incorporated the sulphur antioxidant of Aoyama into the compound of Tasaka. Applicant respectfully disagrees.

The composition of Aoyama is a foam polyolefin resin composition with high shock resistance and rigidity. Aoyama, paragraphs [0017-0019]. As such, the foam resin composition of Aoyama is non-analogous to the fire-retardant composition of Tasaka. A highly rigid resin composition, as described by Aoyama, would not be suitable as a wire insulator as described by Tasaka. See Tasaka, Abstract, and column 8, lines 37-40, stating that the fire-retardant composition must retain flexibility. Thus, one of ordinary skill in the art would not have had any reason or rationale to have attempted incorporation of any of the teachings of Aoyama into the composition of Tasaka.

C. Tasaka And Aoyama Fail To Describe A Non-Crosslinked Flame-Retardant Resin With All Of A Hindered Phenolic Antioxidant, A Sulfurous Antioxidant And A Metallic Oxide, As Recited In Claim 1

Neither Tasaka nor Aoyama describe the inclusion of all of (1) a hindered phenolic antioxidant, (2) a sulfurous antioxidant and (3) a metallic oxide in a non-crosslinked flame-

retardant resin, as required in claim 1. It is evident from the specification, at page 23, line 13, to page 24, line 20, and Tables 1, 2, and 4, that the combined use of all three of (1) a hindered phenolic antioxidant, (2) a sulfurous antioxidant and (3) a metallic oxide, as required in claim 1, results in a non-crosslinked flame-retardant resin composition with greater than expected heat resistance and durability.

Specifically, in a non-crosslinked base resin, such as that recited in claim 1, increased temperature resistance is not observed unless a metallic oxide is incorporated with sulfurous antioxidant and a phenolic antioxidant into the flame-retardant resin composition, as required in claim 1. Tables 1, 2 and 4 of the specification illustrate that heat resistance of a non-crosslinked flame-retardant resin is significantly reduced if either the sulfurous antioxidant or the metallic oxide is reduced to at or below a 0.1 parts by weight level, or if the hindered phenolic antioxidant is not present in sufficient quantities. See Comparative Examples 1, 3 and 9, in particular.

C. Conclusion

Because Tasaka and Aoyama fail to describe a non-crosslinked flame-retardant resin, as recited in claim 1, and further fail to describe the use of the three specific components discussed above, Tasaka and Aoyama fail to render obvious claims 1, 2 and 4-9.

Withdrawal of the rejection is respectfully requested.

II. Claim 10

Claim 10 recites a non-crosslinked flame-retardant resin composition comprising:

(A) a non-crosslinked base resin which contains

a propylene resin containing 50 wt% or more of propylene monomer, and
a polymethylpentene resin having a melting point of 180°C or more,

(B) a metallic hydrate;

(C) a hindered phenolic antioxidant;

(D) a sulfurous antioxidant; and

(E) a metallic oxide, and

wherein the non-crosslinked flame-retardant resin comprises

100 parts by weight of (A) the non-crosslinked base resin:

30-250 parts by weight of (B) the metallic hydrate;

0.3-15 parts by weight of (C) the hindered phenolic antioxidant;

0.3-30 parts by weight of (D) the sulfurous antioxidant; and

0.3-30 parts by weight of (E) the metallic oxide.

As discussed above, neither Tasaka nor Aoyama describe the inclusion of all of (1) a hindered phenolic antioxidant, (2) a sulfurous antioxidant and (3) a metallic oxide in a non-crosslinked flame-retardant resin, as required in claim 10. It is evident from the specification, at page 23, line 13, to page 24, line 20, and Tables 1, 2, and 4, that the combined use of all three of (1) a hindered phenolic antioxidant, (2) a sulfurous antioxidant and (3) a metallic oxide, as required in claim 10, results in a non-crosslinked flame-retardant resin composition with greater than expected heat resistance and durability.


Thus, for at least the reasons discussed here and above, and as evidenced by the disclosure of Tables 1, 2 and 4, Applicant respectfully submits that none of the cited references, whether taken individually or together, render obvious claim 10. Prompt consideration and allowance of at least claim 10 is respectfully requested.

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1, 2 and 4-10 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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